Office of Naval Research International Field Office

Trip Report No. V

Visit to S & T Facilities in Hanoi, Vietnam

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These reports summarize global activities of S&T Associate Directors of the Office of Naval Research International Field Offices (ONRIFO). The complete listing of newsletters and reports are available under the authors' by-line on the ONRIFO homepage: http://www.ehis.navy.mil/onrnews.htm or ONRIFO-Asia homepage: http://www.ehis.navy.mil/onrnews.htm or by email to respective authors.

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Key Words: Hanoi, Vietnam; S & T; Ministry of Science and Technology (MOSTE); National Institute for Science and Technology Policy and Strategy Studies (NISTPASS); National Center for Technology Progress (NACENTECH); National Centre for Natural Sciences and Technology (NCNST or NCST); and MOD Technology Section.

1. Summary

During the period August 20-22, 2001, visits were made to the Ministry of Science and Technology, National Institute for Science and Technology Policy and Strategy Studies, National Center for Technology Progress, National Centre for Natural Sciences and Technology and the MOD Technology Section. These meetings were arranged by U. S. Embassy staff for Dr. Craig Dorman's country visit. His primary goal was to assess the present status of S & T in Vietnam, the future direction and funding priorities of S & T efforts and to learn the strengths/weaknesses of the major governmental participants in S & T.

There are a lot of negatives that could be used to characterize the state of S & T in Vietnam. However, with a recently signed S & T agreement between Vietnam and the United States, change is on the horizon, if for no other reason than the detailed plans for improvements provided in the MOSTE, NISTPASS, NACENTECH and NCST briefings.

This report will focus on contacts at MOSTE and NCST, as scientists in their various institutes are involved in work closely aligned with OAS's scope of interest.

2. Background

On Monday August 20 accompanied Dr. Craig Dorman and Gary Sigmon from U.S. Embassy to this facility:

1. Ministry of Science, Technology and Environment (MOSTE)

On Tuesday August 21 accompanied Dr. Craig Dorman and Gary Sigmon from U.S. Embassy to these facilities:

- 1. National Institute for Science and Technology Policy and Strategy Studies (NISTPASS)
- 2. National Center for Technology Progress (NACENTECH)

On Wednesday August 22 accompanied Dr. Craig Dorman, Gary Sigmon (#1) and Lt. Col. Frank Miller (#2) from U.S. Embassy to these facilities:

- 1. National Centre for Natural Sciences and Technology (NCNST or NCST)
- 2. MOD Technology Section

Dr. Dorman's report will cover each visit in detail. This report focuses on those contacts that can provide S & T cooperation/collaboration in ONRIFO's OAS areas of interest.

State Department restrictions will limit or curtail our involvement with Hong Kong because of its relationship with mainland China. A lukewarm naval interest in the Philippines will similarly limit active ONRIFO ASIA involvement. The potential for engagement with S & T interests in Thailand seems more likely, however, it may well be in the biotechnology sector.

Of the four countries visited with Dr. Dorman, Vietnam provides the best opportunity for ONRIFO involvement. However, given the state of development of the S & T sector, our involvement will most likely be as benefactor rather than as equal partner. The possible exception is in their biology-biotechnology fields. Vietnam has great biodiversity and unique tropical environments that either are or should be of interest to DOD/DON.

Several United States Government Agencies have been, are presently or will be journeying to Vietnam in the near future to become acquainted with their counterparts and to establish cooperation leading to collaboration in their respective fields. This follows the Spring 2001 signing of an S & T agreement between Vietnam and the United States. Among the United States Agencies already involved are: NOAA; NWS; DOE; USGS; US Army; NIH; and EPA.

Professor Hassan Ali (ONRIFO) and Dr. G. D'Andrea (AROFE) visited several sites in Vietnam in April. This was noted in our conversations, as was AOARD's (Dr. Bret Pokines) pending sponsorship of a nanno-technology workshop in 2002.

4. MOSTE and NCST Findings

Two umbrella groups of prime interest to ONRIFO OAS's future activities are MOSTE and NCST. We were accompanied on our Hanoi visits by Ms. Phuong of MOSTE and Mr. N. Lap of NCST. Because of their positions within their respective organizations and direct knowledge of Vietnamese scientists and institutions throughout their country, it is my opinion that S & T contacts in Vietnam should be funneled directly through them. The reasons are simple:

- 1. They are familiar with ONRIFO, our programs and capabilities.
- 2. They have had two ONRIFO visits in the last five months.
- 3. They have a good working relationship with US Embassy personnel.
- 4. They are located within the HQ of MOSTE and NCST and thus know the proper contacts and because of their positions within the hierarchy possess "clout" with scientists at the 17 institutions that perform Vietnam's S & T work.
- 5. They have been given the task of implementing international S $\&\ T$ cooperation and collaboration.

I presented both Ms. Phuong and Mr. Lap with verbal proposals for collaboration with researchers in the United States: (1) Dr. G. M. Purdy, Director, Lamont Doherty Earth Observatory of Columbia University and (2) Dr. John Brock, of USGS, St. Petersburg, Florida. Initial contact by Drs. Purdy and Brock took place within 24 hours of our initial meeting at MOSTE and NCST.

These initial inquiries from US scientists fit well with Vietnam's stated needs and interests for international cooperation/collaboration. There is an urgent need for coastal data for establishment of an integrated Coastal Zone Management Project. In-depth studies of Vietnam's rivers would provide needed data for navigation, hazards, flood control, etc. Lamont's interest is in marine geological and geophysical investigations related to Vietnam's 3300 km of shoreline as well as river studies similar to their Hudson River study for New York State. This is an area where LDEO could provide needed assistance at minimal cost to ONRIFO. (A VSP or two would be needed for appropriate Vietnamese scientists to travel to Lamont. Hopefully, a NICOP could be developed as a result of this effort.)

Remote sensing of Vietnam was being stressed during all meetings, in particular as it pertains to: understanding biodiversity; agriculture; disaster relief; mining and minerals; health of coral reefs and the fishing industry; population relocation; identification of areas needing remediation; water management and treatment; land use; climate change; coastal changes (retreat and advance); creation of data bases; humanitarian projects; and demining. Dr. Brock is interested in remote sensing of their coral reefs and access to data from Vietnam. This should not involve requests for ONRIFO support.

Others at USGS, Office of Marine Geology in Woods Hole, Massachusetts are interested in becoming involved in some of these other research areas. However, funding requests to ONRIFO should be limited to a VSP or two.

Vietnam already has several international partners/collaborators. Among them are: Russia; Ukraine; Poland; China; France; Germany; India; Japan; and Korea. There exists a unique opportunity for the United States Navy, through ONRIFO Tokyo to become involved in S & T issues with Vietnam. Vietnam has qualified ocean and earth scientists, but doesn't have the current laboratory or computer processing capability. They are interested in many of the scientific areas that US scientists are, but since the VN government determines and funds projects of national and ministerial importance, the overriding determinate of Vietnamese S & T direction is very focused.

It might be best to involve US academic institutions like LDEO and US governmental agencies like USGS in studies mention above and to have ONRIFO work out an engagement strategy for de-mining Vietnam's coastal and river waters. Perhaps Dr. Todoroff would be interested in a de-mining workshop in Vietnam. In addition to the bathymetric and oceanographic data that would be collected, there are substantial humanitarian and public relations benefits as well as verification/testing of new detection techniques and equipment in settings such as Haiphong Harbor or any of the major Vietnamese rivers.

5. Hanoi Contacts

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